

LAND APPLICATION SITE

WILLIAM M. IRBY

LUWMI 1-4

LUNENBURG COUNTY

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 12-1-13 between William M. Irby referred to here as "Landowner", and Recyc Systems, Inc, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Lunenburg, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
<u>38-A-2</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ The Landowner is the sole owner of the properties identified herein.
☐ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

WILLIAM IRBY
Landowner - Printed Name, Title

William Irby
Signature

2071 Varicks Chapel Rd
Kenbridge, VA 23944
Mailing Address & Phone Number
434-676-8613

Permittee:

Recyc Systems, Inc, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

[Signature]
Permittee - Authorized Representative
Printed Name

Signature

PO Box 562 Remington, Virginia 22734
Mailing Address

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Recyc Systems, Inc

County or City: Lunenburg

Landowner: William Mack Irby

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil.
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

William Irby
Landowner's Signature

1 Dec. - 2013
Date

Beverly C. Lewis
Farm Operator Signature

12-9-13
Mailing Address & Phone Number

FARM DATA SHEET

SITE NAME:	William M. Irby	COUNTY:	Lunenburg
OWNER:	Hester, William Mack, and Chae Yon Irby c/o William Mack Irby	OPERATOR:	Beverly Fowlkes
OWNER'S ADDRESS:	7725 Acrocomia Drive Hanover, MD 21076	OPERATOR'S ADDRESS:	1457 Varick Chapel Road Kenbridge, VA 23944
OWNER'S TELEPHONE:	410-551-3524	OPERATOR'S TELEPHONE:	434-676-1880
GENERAL FARM TYPE:	Hay/ Row Crops	CELL PHONE:	-
# CATTLE:	None	EMAIL:	-
LAGOON or SLURRY:	None	LATITUDE:	36°59'34"
TOPO QUAD:	Kenbridge East	LONGITUDE:	78°02'26"
COMMENTS:	Hester Irby and Chae Yon Irby are both now deceased. William Mack Irby inherited their share of the land.		

BB 8

RECYC SYSTEMS, INC

FIELD DATA SHEET

Field Identification	Gross Acres	Environmentally Sensitive Soils				Hydro Map	Tax Map #	FSA Tract #
		Water Table	Bed Rock/Shallow	Surf/Leach	Freq Flood			
LUWMI 1	6.3	-	-	-	-	CU 07	TM 38-A-2	T 128 F 1, 2
LUWMI 2	6.3	-	-	-	-	CU 07	TM 38-A-2	T 128 F 3
LUWMI 3	6.8	-	-	-	-	CU 07	TM 38-A-2	T 128 F 3
LUWMI 4	2.0	-	-	-	-	CU 07	TM 38-A-2	T 128 F 3
TOTAL ACRES IN SITE	21.4							

Landowner Coordination Form

Signature not required on this page

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Report Number: 14-008-0511

Account Number: 70594



www.aleastern.com

A&L Eastern Laboratories

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: RECYC SYSTEMS INC
SUSAN TRUMBO
8455 WHITESHOP RD
CULPEPER VA 22701

Grower:
WILLIAM IRBY/LUWMI
LUNENBURG

Submitted By: BB
Farm ID:

SOIL ANALYSIS REPORT

Analytical Method(s):
Mehlich 3

Date Received: 01/08/2014

Date Of Analysis: 01/09/2014

Date Of Report: 01/09/2014

Sample ID Field ID	Lab Number	Organic Matter			Phosphorus				Potassium		Magnesium		Calcium		Sodium		pH		Acidity	C.E.C
		%	Rate	ENR lbs/A	Mehlich 3 ppm	Rate	Reserve ppm	Rate	K ppm	Rate	Mg ppm	Rate	Ca ppm	Rate	Na ppm	Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
1	15716	3.3	M 10	109	39	M			73	M	86	M	538	M			5.5	6.81	1.2	4.8
2	15717	1.8	L 8	80	70	H			91	M	93	H	557	M			6.5	6.90	0.3	4.1
3	15718	1.8	L 8	81	29	L			81	M	70	H	469	M			6.2	6.89	0.4	3.6
4	15719	2.7	M 9	98	24	L			52	L	127	H	526	M			6.1	6.87	0.6	4.4

Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts	Chloride	Aluminum
	K %	Mg %	Ca %	Na %	H %	NO ₃ N ppm	S ppm	Zn ppm	Mn ppm	Fe ppm	Cu ppm	B ppm	SS ms/cm	Cl ppm	Al ppm
1	3.9	14.9	56.0		26.0										
2	5.7	18.9	67.9		7.4										
3	5.8	16.2	65.1		12.0										
4	3.0	24.1	59.8		13.8										

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.
Analysis prepared by: A&L Eastern Laboratories, Inc.

by: *Paucic McGroary*

Paucic McGroary

Paucic McGroary

Report Number: 14-008-0511

Account Number: 70594



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A&L Eastern Laboratories

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: RECYC SYSTEMS INC
SUSAN TRUMBO
8455 WHITESHOP RD
CULPEPER VA 22701

Grower:
WILLIAM IRBY/LUWMI
LUNENBURG

Submitted By: BB
Farm ID:

Date Received: 01/08/2014

Date Of Report: 01/09/2014

SOIL FERTILITY RECOMMENDATIONS

Sample ID Field ID	Intended Crop	Yield Goal	Lime Tons/A	Nitrogen N lb/A	Phosphate P ₂ O ₅ lb/A	Potash K ₂ O lb/A	Magnesium Mg lb/A	Sulfur S lb/A	Zinc Zn lb/A	Manganese Mn lb/A	Iron Fe lb/A	Copper Cu lb/A	Boron B lb/A
1	Adjust pH to 6.8	0	1.8				0						
2	Adjust pH to 6.8	0	1.0				0						
3	Adjust pH to 6.8	0	1.3				10						
4	Adjust pH to 6.8	0	1.3				0						

Comments:

Sample(s): 3 Crop: Adjust pH to 6.8

If dolomitic lime is not used, apply required magnesium with magnesium oxide. Epsom Salts, K-Mag or Sul-PO-Mag.

"The recommendations are based on research data and experience, but NO GUARANTEE or WARRANTY expressed or implied, concerning crop performance is made."

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Pauric McGroary

THE PLANNER IS NOT STATE CERTIFIED

Nutrient Management Plan Balance Sheet
(Spring, 2014-Summer, 2016)

William M. Irby

Planner: Recyc Systems, Inc

Tract: 128

Location: Lunenburg

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes	
1, 2/LUWMI 1(N)	6/6	2014	Corn (grain)	100-60-60	20/0				80-60-60	N/A			
3/LUWMI 2(N)	6/6	2014	Soybeans (FS)	0-60-60	0/0				0-60-60	N/A			
3/LUWMI 3(N)	7/7	2014	Corn (grain)	100-60-60	20/0				80-60-60	N/A			
3/LUWMI 4(N)	2/2	2014	Fescue grass hay mt.	70-50-95	0/0				70-50-95	N/A			

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

Soil Test Summary

Tract	Field	Acre	Date	P2O5	K2O	Lab	Soil pH	Lime Date	rec. lime tons/Ac
128	LUWMI 1	6	2014-Wi	M (39 P ppm)	M (73 K ppm)	A&L MIII	5.5		
128	LUWMI 2	6	2014-Wi	H (70 P ppm)	M (91 K ppm)	A&L MIII	6.5		
128	LUWMI 3	7	2014-Wi	M (29 P ppm)	M (81 K ppm)	A&L MIII	6.2		
128	LUWMI 4	2	2014-Wi	M- (24 P ppm)	L+ (52 K ppm)	A&L MIII	6.1		

Field Productivities for Major Crops

Tract Name	Tract/ Field	Field Name	Acres	Predominant Soil Series	Corn	Small Grain	Alfalfa	Grass Hay	Environmental Warnings
128	128/1, 2	LUWMI 1	6	Cecil	IVb	IV	III	IV	
	128/3	LUWMI 2	6	Appling	IVb	IV	III	IV	
	128/3	LUWMI 3	7	Appling	IVb	IV	III	IV	
	128/3	LUWMI 4	2	Appling	IVb	IV	III	IV	

Yield Range

Field Productivity Group	Corn Grain Bu/Acre	Barley/Intensive Wheat Bu/Acre	Std. Wheat Bu/Acre	Alfalfa Tons/Acre	Grass/Hay Tons/Acre
I	>170	>80	>64	>6	>4.0
II	150-170	70-80	56-64	4-6	3.5-4.0
III	130-150	60-70	48-56	<4	3.0-3.5
IV	100-130	50-60	40-48	NA	<3.0
V	<100	<50	<40	NA	NA

Farm Summary Report

Plan: New Plan Spring, 2014 - Summer, 2016

Farm Name: William M. Irby
Location: Lunenburg
Specialist: Recyc Systems, Inc
N-based Acres: 21.4
P-based Acres: 0.0

Tract Name: 128
FSA Number: 128
Location: Lunenburg

Field Name: LUWMI 1
Total Acres: 6.30 **Usable Acres:** 6.30
FSA Number: 1, 2
Tract: 128
Location: Lunenburg
Slope Class: C **Hydrologic Group:** B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K		Lab
Wi-2014	5.5	M(39 P ppm)	M(73 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
20	5B2	Cecil
80	5C2	Cecil

Field Warnings:**Crop Rotation:**

PLANTED	YIELD	CROP NAME
2014-Sp	90.0 bushel(s)	Corn (grain) - No Till

Field Name: LUWMI 2

Total Acres:	6.30	Usable Acres:	6.30
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FSA Number:	3
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Tract:	128
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Location:	Lunenburg
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Slope Class:	B	Hydrologic Group:	B
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Riparian buffer width: 0 ft

Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K		Lab
Wi-2014	6.5	H(70 P ppm)	M(91 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
31 1B	1B2 App	Appling
33 1C	1C2 App	Appling
35 5B	5B2 Cec	Cecil
2 5C	5C2 Cec	Cecil

Field Warnings:**Crop Rotation:**

PLANTED	YIELD	CROP NAME
2014-Sp	26.3 bushel(s)	Soybeans (FS) - No Till

Field Name: LUWMI 3

Total Acres: 6.80 Usable Acres: 6.80
FSA Number: 3
Tract: 128
Location: Lunenburg
Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K		Lab
Wi-2014	6.2	M(29 P ppm)	M(81 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
22 1B	1B2 App	Appling
34 1C	1C2 App	Appling
35 5B	5B2 Ce	Cecil
9 5C	5C2 Ce	Cecil

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	90.0 bushel(s)	Corn (grain) - No Till

Field Name: LUWMI 4

Total Acres: 2.00 Usable Acres: 2.00
FSA Number: 3
Tract: 128
Location: Lunenburg
Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K		Lab
Wi-2014	6.1	M-(24 P ppm)	L+(52 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
37	1B2	Appling
33	1C2	Appling
30	5B2	Cecil

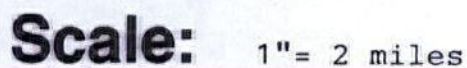
Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	2.1 * tons	Fescue grass (hay), maint. - No Till

MAPS

(Biosolids Land Application)



LUWMI 1-4

VICINITY MAP



(Biosolids Land Application)



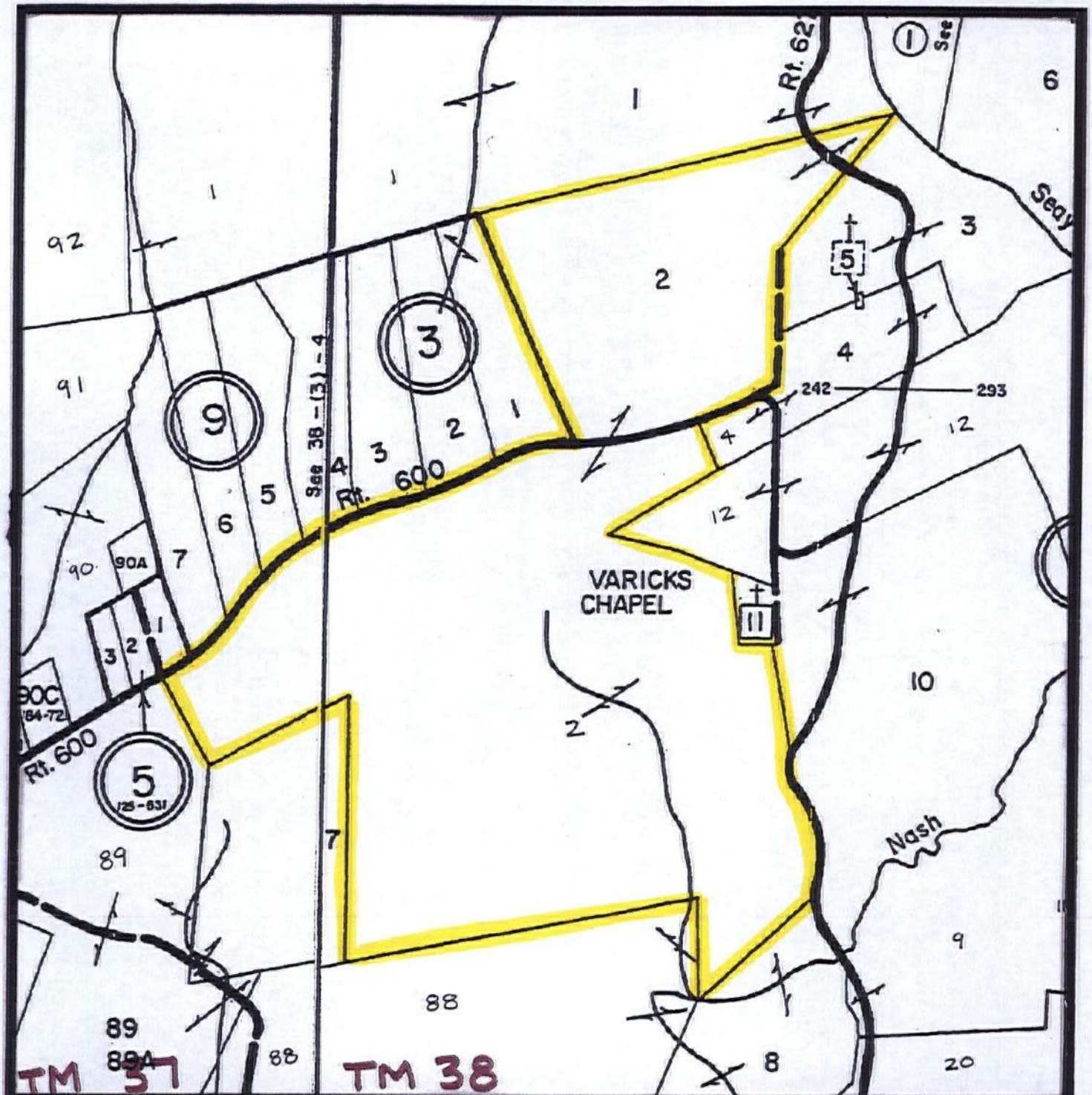
LUWMI 1-4

VICINITY MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale:

1" = 660 ft.

LUWMI 1-4

TAX MAP



ADJOINING LANDOWNERS

William Mack Irby

LUNENBURG COUNTY

Tax Map	Parcel #	Owner Name(s)
37-A	88	Charlie Fowlkes c/o Beverly Fowlkes
37-5	1	Eddie Hendricks Jr.
	2	R. L. or Bessie Mae Callahan
37-9	5	Ann Gordon and Linda Gordon and Canstance Gordon Collins
	6	Talia T. Reavis-Jefferson
	7	Emma G. Jones
38-A	1	David W. Rash and Rita Ayers Rash Trustees, Rash Family Living Trust
	3	Hester and William Mack and Chae Yon Irby
	4	John Rpbert and Walter Frank II Gee
	7	David Hite
	8	Edwin B. Jr. and William Lee Nash
	10	Gilliam Oliver Estate
	11	Varicks Chapel Church
	12	Richard T. or Carolyn H. Hite
38-3	1	Gertrude Cooper et. al.
	2	Pinkie P. Stewart and Julius Tyrone and Cynthia S. Braston
	3	Greta Y. Stewart or Rose G. Reavis
	4	Franklin F. Gordon



Soil Map—Lunenburg County, Virginia



Scale: 1" = 660 ft.

LUWMI 1-4

SOIL MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)



Farm: 3867
Tract: 128



Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.

Lunenburg County, VA

December 26, 2013

Scale: 1" = 660 ft.

LUWMI 1-4

AERIAL MAP

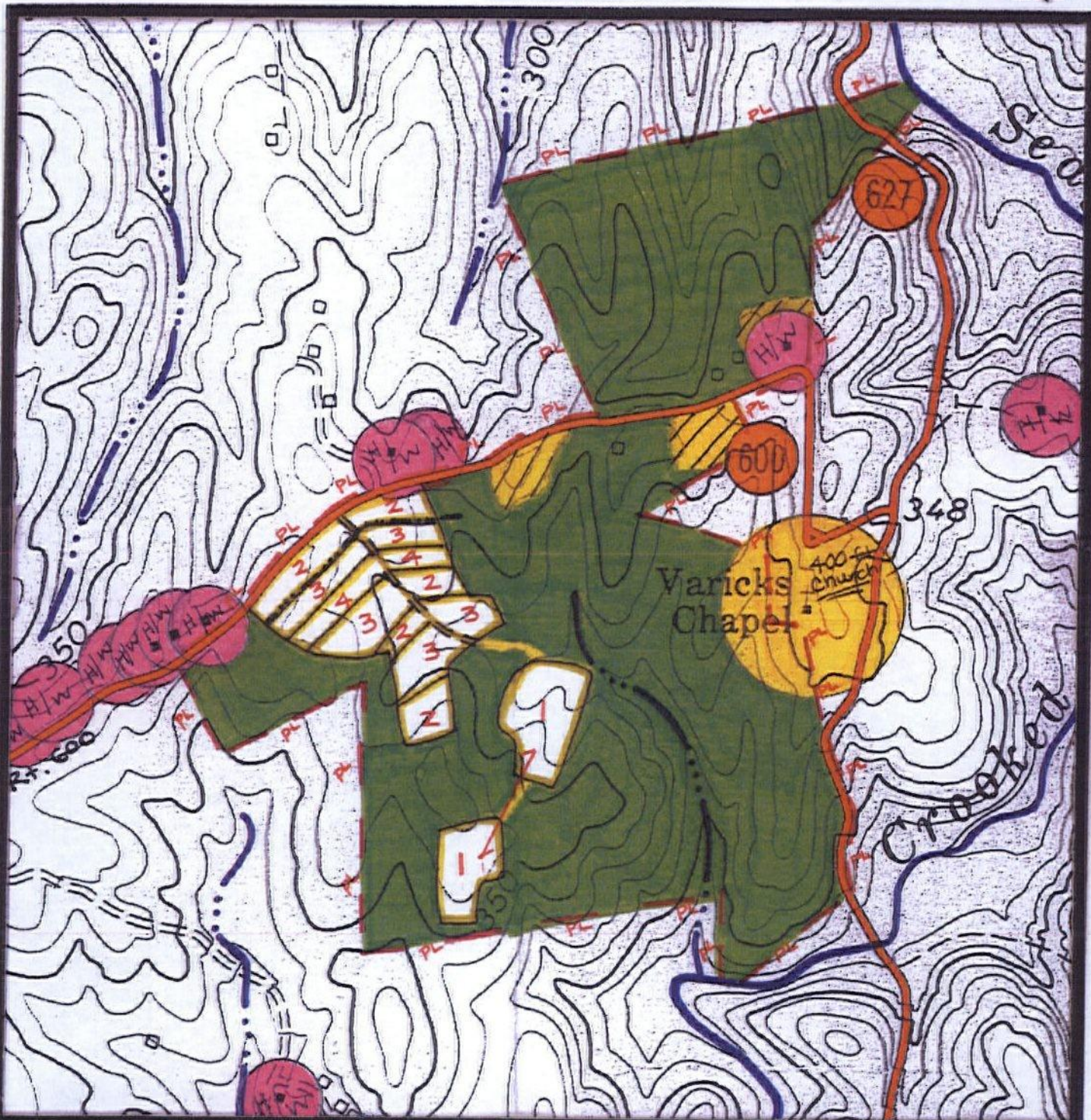


Legend for Site Plan

	House and Well
 	Well / Spring
 	Perennial Streams & Surface
	Wet Spot
	Intermittent Stream / Drainage
	Trees and Woods
	Private Drive
	Rock / Rocky Area
	Sinkhole
	Severely Eroded Spot
	State Road
 	Field Boundary / Fence
	
	Slope
	Frequent Flooded Soil

Inc.

(Biosolids Land Application)



Scale: 1" = 660 ft.

LUWMI 1-4

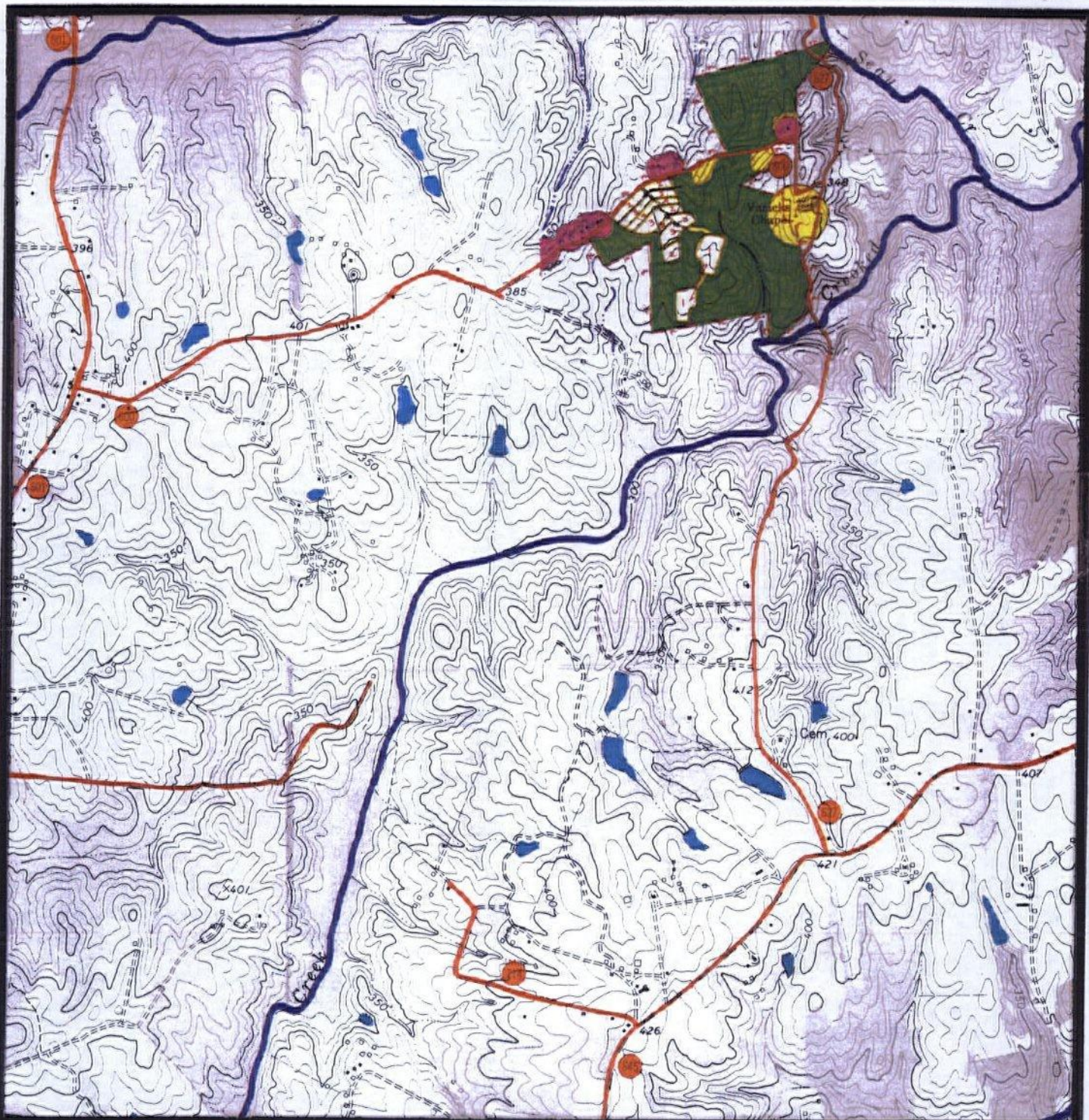
SITE PLAN



Recyc SystemsTM

Inc.

(Biosolids Land Application)



Scale: 1" = 2000 ft.

LUWMI 1-4

TOPOGRAPHIC MAP

